

ABSTRACT

The present invention provides a process for forming a semiconductor film, comprising the steps of applying a  
5 semiconductor particle dispersion liquid to a substrate surface by spray coating in such a manner that the atomized droplets of the dispersion liquid discharged from the spray coater have a mean diameter of about 30  $\mu\text{m}$  or less, and drying the coating to form a porous semiconductor film; and use of the semiconductor  
10 film obtained by the process.